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FRONT COVER

The frog was a favorite motif among Fort Ancient pipes. This small sandstone pipe is the sculpture of the frog in a lifelike sitting attitude and is carved in the full round. The sandstone from which it is made is a dark orange brown in color. It was found in northern Pike County just across the Ross County line and is now in the collection of Dr. Gordon Meuser of Columbus, Ohio.

Editor's Page

A curious aspect about the science of Archaeology is that as soon as one question is answered and one fact proved it immediately brings to mind a hundred new questions which cannot be answered. Like the Hydra of mythology, when one head was cut off two grew back in its place. Although we seemingly know a great deal about the archaeological picture in Ohio there are a number of unanswered questions.

Much has been learned about the Paleo-Indian in the last ten years from the work done by Prufer and Baby, but as yet a kill site has not been found in Ohio or east of the Mississippi. Mastodons have been found over many parts of Ohio, some under very favorable circumstances, and yet we have not the slightest clue by artifact association that our eastern Paleo-Indians hunted these or any other extinct animals – this in spite of the large numbers of fluted points found in our state.

Probably the largest void in Ohio archaeology is the Archaic period. Although Archaic artifacts have been found over Ohio by the thousands, and Archaic man made our state his home for many thousands of years, his burials are a rarity in the extreme and burial associated artifacts almost unheard of. It seems impossible that prehistoric groups of people could live here for so long and leave only scattered stone artifacts as evidence of their passing.

We know very little about the Glacial Kame people and why they inhabited only the northwest portion of our state. We don't know why some of their dead were buried with rich burial offerings while others were carelessly or haphazardly interred. There have been literally hundreds of burials found in some locations without a single artifact. It has been assumed for some time that because of the rare incidence of pottery with Glacial Kame burials that this period fits somewhere between Late Archaic and Early Woodland. If this is true then what happened to them in later periods? And why are some of their shell gorgets identical with those of later Hopewell while other artifacts are totally dissimilar? Why is the great bulk of slate artifacts found in the Glacial Kame area of northwestern Ohio, including classic Adena and Hopewell types far from their centers in southern Ohio?

For many years archaeologists have been puzzled by the absence of village sites close to the large earthworks. Current theory that the Hopewellians, for example, lived in small family farming groups brings up many interesting questions. This theory implies a sophisticated communications network wherein these groups could be easily assembled at some central location in numbers sufficient to construct large earthworks of the magnitude of those at Newark or Fort Ancient. Even if this implied congregation of Hopewellians came about, where did they stay during the time the mounds were built without leaving some material evidence of their presence? As any surface hunter can tell you, hunting near large mound locations is not particularly rewarding.

And what of the Intrusive Mound culture, an elusive group who came into Ohio after the demise of the Hopewell culture and buried their dead in the tops of existing Hopewell mounds? Their origin was apparently in the New York area and yet few traces of them are found between New York and southern Ohio.

At the close of the Hopewell period a number of hilltop fortifications were constructed from Licking County southwesterly to Hamilton County. Many of these works are enormous in size and were undoubtedly built as refuges from attack. At about the same time smaller, but similar, fortifications were being built along the southern shore of Lake Erie. But against whom were they defending themselves? The disparity between Carbon 14 dates for Hopewell and Fort Ancient would apparently eliminate contact between the two peoples. This time gap is supposedly filled by the Late Woodland period. But evidence for Late Woodland is scanty and scattered in Ohio and not well understood.

These and many more questions may someday be answered. But perhaps a new look at Ohio archaeology is needed – one with a fresh outlook unhindered by preconcieved ideas or theories advanced thirty or forty years ago.

Robert N. Converse,
Editor.

A Fort Ancient Effigy Pipe

by
Robert N. Converse
Plain City, Ohio

This finely made pipe was found on the Shearer farm in Union County, Ohio many years ago. Although broken around most of the circumference of the rim from ancient damage, the balance of the piece is relatively in tact and unmarked. It is, in the authors opinion, one of the best carved pipes of its type he has seen and an excellent example of Fort Ancient sculpture.

Larger than many human effigy pipes portraying the head alone, it measures over 3½ inches at its widest point and over 3 inches in height. The material is a dark yellow-brown sandstone - typical of Fort Ancient - of a fine grained texture. A layer of dark brown stone about 1/8 inch thick covers the flat bottom and is the outer crust of the original sandstone strata. This layer is much harder and may take its color and hardness from iron pigments.

The carving itself is excellently done with deeply incised lines depicting the eyes, mouth, and the weeping eye design. The nostrils and upper lip furrow are also shown by less deeply incised markings. The bowl, which was originally about 1½ inches wide, is oval shaped and smooth. In the back is the connecting stem hole which is conical and about 7/8 inch wide. This fine pipe is now in the collection of Mr. and Mrs. George Morelock of Marysville, Ohio, and is one of the few Fort Ancient pipes known to have been found in Union County.

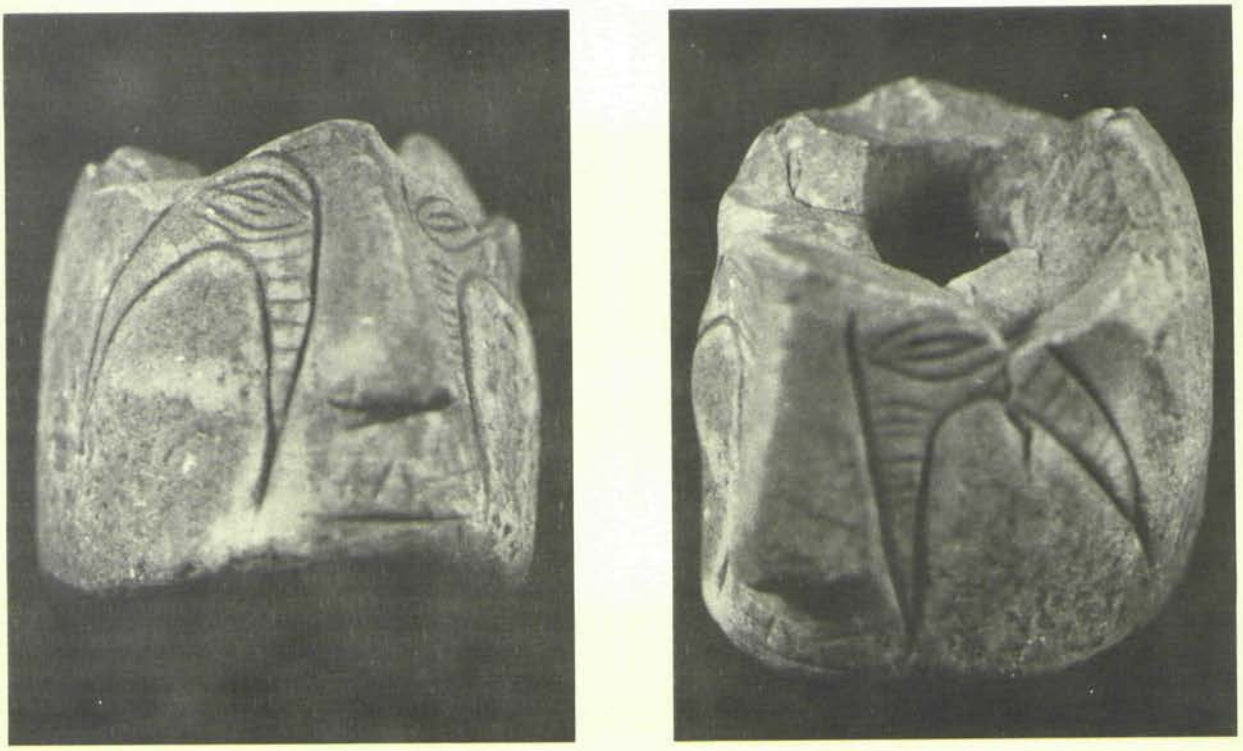

Fig. 1 (Converse) Two views of a sandstone Fort Ancient effigy pipe.

A Danish Dagger

by
Ernest Good
Grove City, Ohio
and
Robert N. Converse
Plain City, Ohio

Late in the European neolithic the first bronze weapons found their way into northern Europe by trade and warfare. This new material was of course totally strange to a people still in the stone age and anything made of metal could only belong to the wealthiest of chieftans or bravest of warriors. One highly prized weapon was a bronze dagger — usually from 7 to 10 inches long — with a flat excurvate blade. The square handle was enclosed with a carefully stitched leather covering. Those not fortunate enough to possess such a rare weapon had their desires satisfied in a particularly curious way — neolithic flint knappers duplicated these scarce metal daggers in stone! Showing complete mastery of flint working techniques, they chipped superb copies of their bronze counterparts. They duplicated them in minute detail and even went so far on some specimens as to chip tiny alternate flakes along the edges of the square handle in an effort to imitate the stitching in the leather handle of the original. Thus, it is among Danish flint daggers that we see some of the finest specimens of flint craftmanship in the world.

Pictured is a fine dagger from the collection of Ernest Good. It is made of a semi-lustrous tan Nordic flint with cream colored inclusions. The handle is highly polished and along the right hand edge may be seen the flakes representing the pseudo-stitching. This fine artifact is 9¼ inches in length.

Fig. 1 (Good and Converse) Danish flint dagger 9¼ inches long.

Physical Determination of the Variety of Quartz in Artifacts

by
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The mineral composition of most artifacts consists of at least one variety of quartz (silica). Varieties of quartz include crystal quartz, carnelian, sard, chrysoprase, agate, onyx, flint, chert, jasper and prase. Confusion is inevitable among collectors of Indian artifacts as to what constitutes each variety of quartz, because authors differ in their descriptions. A good example is the problem of distinguishing between flint and chert. According to Bates and Sweet (1966: 97), "Most chert is white or gray; black varieties are called flint"; but according to Zim and Shaffer (1957: 80), "Chert, or hornstone, is an impure form of flint – usually more brittle. Color: white, yellow, gray, or brown." According to personal communications (1970) with Dr. Sidney White (Dept. of Geology, Ohio State Univ.) and Robert N. Converse (Editor, The Archaeological Society of Ohio), flint and chert are both impure forms of quartz, and therefore should be considered as the same material. I can agree with Converse that much of the problem is one of semantics, but if collectors intend to intelligently classify the mineral composition of their artifacts, it seems essential that conventional guide be formulated.

I have designed a key to the classification of my artifacts (see Table 1) by comparing the views of several authors. This key is very similar to Britt's (1968) geological classification of silica minerals, but in areas of confusion I extracted those viewpoints that the authors shared in common. Quartz is a mineral that consists of the elements silicon and ozygen in the ratio of 1:2 (SiO_2); it is characterized by conchoidal fracture, hardness of 7, specific gravity of 2.6 and due to impurities can occur in any color. Quartz can be divided into two groups: crystalline and cryptocrystalline (microscopic crystals). The cryptocrystalline group "can in turn be subdivided into a parallel fibrous crystal arrangement and a heterogeneous finely granular type" (Pough, 1960: 231). According to Britt (1968: 62), " A crystal, as defined by Hurlbut ... is 'a homogeneous body bounded by smooth plane surfaces that are the external expression of an orderly internal atomic arrangement.' " Quartz crystals are pointed and hexagonal (6-sided).

Chalcedony is the general term applied to the fibrous varieties of cryptocrystalline quartz (Britt, 1968: 62). Chalcedony is translucent and appears to havy a waxy luster; "... the individual crystals are arranged in slender fibers in parallel bands" (Pough, 1960: 231). The fibrous varieties include carnelian, sard, chrysoprase, agate and onyx. According to Britt (1968: 63), carnelian is red; according to Spock (1962: 14,18), it is shades of orange red or brownish reds, and according to Zim and Shaffer (1957: 80), it is some shade of red or reddish brown. Therefore it would seem that any translucent quartz that is any shade of red or orange should be classified as carnelian.

Although Zim and Shaffer (1957: 80) recognize sard as another name for carnelian, Britt (1968: 63) distinguishes between the two by describing sard as being brown to honey-colored chalcedony. Perhaps arbitrarily, I have accepted Britt's description, and note possible difficulty in separating deep red from brown. Chrysoprase is apple-green (due to nickel-oxide) and is very rare. Agate is characterized by alternating bands of color, and onyx has alternating color layers arranged in parallel planes. It should be noted that the thickness of an artifact may limit its translucency, and therefore, without damaging the artifact, make determination of the quartz variety difficult, if not impossible.

Granular varieties of cryptocrystalline quartz lack definite banding and translucency, and have more impurities. The granular varieties include flint, chert, jasper and prase. Since descriptions of chert, jasper and prase are in relative agreement among authors, I will discuss flint last in the hope that the process of elimination will simplify classification. According to general consensus, chert is a light colored (white, gray or yellow) opaque variety of quartz (Bates and Sweet, 1966: 97: Britt, 1968: 63; Spock, 1962: 18). Also according to Britt (1968: 63) and stout and Schoenlaub (1945: 13), chert may sometimes be fairly porous and have a tendency on weathering to develop a white patina

(incrustation). Jasper may be any shade of red, red-orange, orange or yellow-orange (Britt, 1968: 63; Spock, 1962: 18; Zim and Shaffer, 1957: 80). It should be noted that chert and jasper are both credited with being brown, and according to Zim and Shaffer (1957: 80), jasper may grade into chert. Although "brown" is a shade of red or red-violet and therefore would be jasper, I recognize chert as also being light brown. Prase is simply described as dull green (Britt, 1968: 63).

Authors seem to be more inconsistent in classifying flint than any other variety of quartz. Some claim flint can be only a dark color (e.g., Britt, 1968: 63) or more specifically only black (e.g., Pough, 1960: 233). According to Spock (1962: 219), "Chert is the general name for chalcedonic bodies in limestone. The dark variety found in chalk is called flint, but petrographically it is the same as chert, so that the name serves only to designate an association with chalk." Other authors credit flint with any color. Flint is reported to be found on Flint Ridge in a wide variety of colors, and according to Stout and Schoenlaub (1945: 11), flint can be gray, black, white, clear, milky, pink, green, red or blue; "the color seems to result from the combined agencies of many substances present in small amounts. Iron compounds such as pyrite give gray, blues, or blacks; limonite gives browns and yellows; and hematite gives red or purple red." In this collector's opinion, "flint" has been over-used as a catchall name for many varieties of quartz. The ease with which all these varieties can thus be classified may be the reason that "flint" has become Ohio's official gem stone.

Some authors have avoided color descriptions and choose to rely instead on glossiness and dullness. According to Converse, "I go by appearance only – if it is dull it is chert, if it is shiny it is flint." Converse also has discredited chipping quality as a criterion because "some of our Delaware chert surpassed nearly all of it when it came to ability to work it." Whereas colors can be determined somewhat objectively by comparison with color charts, glossiness and dullness must be evaluated subjectively, and therefore cannot be the determining factor in the classification of flint and non-flint quartz. What constitutes flint seems to be answerable only by eliminating what it cannot be. It would seem that flint could most consistently be considered black, blue and possibly dark glossy red and green.

Britt (1968: 63) made the excellent suggestion the "Due to the multi-color appearance of some specimens, it is possible to have both flint and chert in the same artifact. Also, an artifact may be translucent in some areas and opaque in other parts. In such cases, the artifact would be a combination of chalcedony and flint, jasper, chert, etc." It is unfortunate that authors' viewpoints must be compared before attempting to classify mineral composition of artifacts. At present, accurate descriptions (e.g., red translucent quartz) have more universal meaning than specific names (e.g., carnelian). Perhaps someday archaeologists and geologists will formulate a conventional guide for the physical determination of the variety of quartz in artifacts.

I am indebted to Kenneth W. Laub (Technical Editor, Division of Wildlife) for his help in preparing this report.

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Stout, Wilbur, and R. A. Schoenlaub
1945 The occurrence of flint in Ohio. Ohio Geological Survey, Fourth Series, Bulletin 46, Columbus. 110 pp.

Zim, Herbert S., and Paul R. Shaffer
1957 Rocks and minerals. Golden Nature Guide, Golden Press, N.Y. 160 pp.

Table 1. – Key to the physical determination of the variety of quartz in artifacts.

Crystalline Quartz: pointed and hexagonal

Cryptocrystalline Quartz

a. fibrous variety (chalcedony): translucent and smooth
   1. carnelian: shades of red to orange
   2. sard: brown to honey colored
   3. chrysoprase: apple-green
   4. agate: alternating bands of color
   5. onyx: alternating color layers arranged in parallel planes

b. granular variety: opaque; more impurities; no definite banding
   1. flint: dark colored, black, blue or possible glossy red or green
   2. chert: light colored, white, gray, yellow or possibly brown; may be porous; may have white patina
   3. jasper: shades of red, red-orange, orange or yellow-orange
   4. prase: dull green

Artifacts from the Ochsner Collection

by
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Box 15
Johannesburg, Michigan

Fig. 1 (Ochsner) A small pottery figurine which I found on the Hardin Village site in Greenup County, Kentucky. Portions of the feet are missing.

Figure 2 (Ochsner) A well preserved elbow pipe from Blennerhasset Island is the Ohio River. The incised turtle design may be plainly seen. An X or cross is engraved on the front of the bowl.

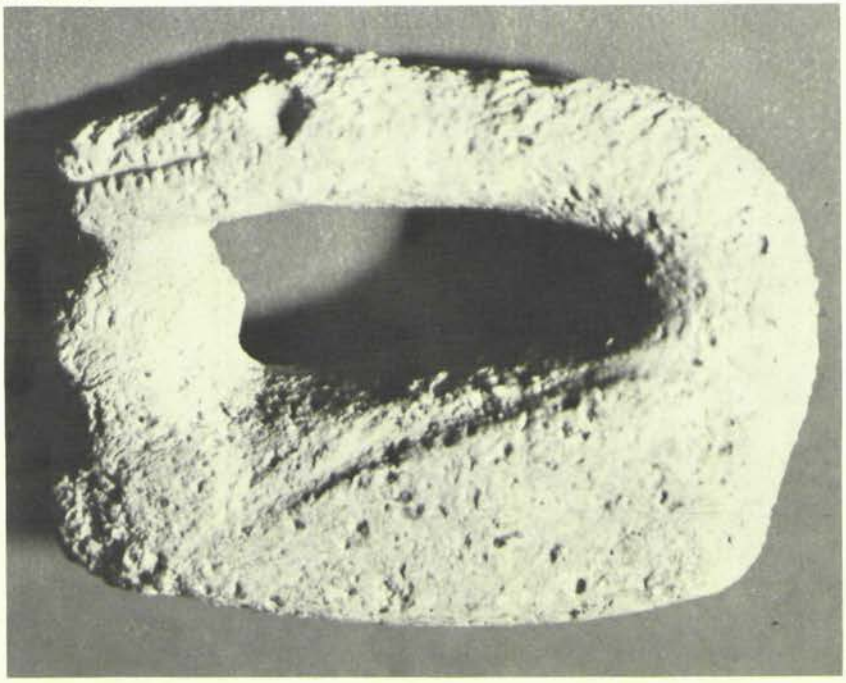

Fig. 3 (Ochsner) Crane Effigy Pipe.

The McGraw Garden Site: An Earth Resistivity Survey Experiment

by
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The McGraw Garden site (Prufer and Shane 1970: 59, 240, 243) is located in the first terrace above a prehistoric channel of the Scioto River near the present southeast city limits of Chillicothe, Ross County, Ohio. The approximate co-ordinates are 39° 19' North latitude, 82° 57' West longitude. That portion of the terrace including the site is somewhat triangular, being severed on the southwest by old routes 35 and 50 known as Eastern Avenue in Chillicothe (Figs. 1 and 2). At one time the terrace probably extended southward for nearly 1 mile where the prehistoric confluence of Paint Creek and the Scioto River occurred. Presently the confluence takes place 1.7 miles south-souteast of the site.

Based upon surface evidence and the resistivity survey, the site extends approximately 360 feet in length and varies from approximately 75 feet to 200 feet in width. It is about 610 feet above sea level. Alluvial deposits have filled the prehistoric bed of the Scioto River and it is currently less than 600 feet in elevation. No excavation was made to ascertain the original level of the river bed.

The survey was started during the last week of July 1970, with the Dana Baker family and Don Kegg assisting. We staked out a portion of the site using a compass with a telepone pole as a basic reference point. A line was extended from the pole at a bearing of 60° east of north; a second line perpendicular to the first was established 100 feet from the pole. A probe spacing of 4 feet was used to provide readings to a depth of 6 feet. The results of the earth resistivity survey are shown in Figure 3, and the four readings which were considered anomalies are noted.

Anomaly #1, excavated by Dennis Baker, was hearth located below 18 inches of midden (Figs. 4-6). The thickness of the midden screened our readings of anything other than the variance of the midden depth where the subsoil had been disturbed.

Anomaly #2, also a hearth, was investigated by the author (Figs. 7-10).

Anomaly #3 (Figs. 11-14) was a large depression below the midden. Its function was not definite. It contained many fire-cracked rocks and a few artifacts. Small charcoal deposits indicated that it could have been a large fire pit. It was excavated by Norma and Dana Baker.

Anomaly #4 was a slight rise of the subsoil tested by Gary and Kevin Baker; no archaeological feature was noted.

The earth resistivity survey was capable of detecting points where prehistoric man had made depressions in the surface which existed during the early occupation of this site. If later cultures occupied the location and established hearths or dug pits that did not extend through the midden and into the subsoil, they were not detectable. The subsoil is clay with some sand and, as shown in Figure 3, it has a relatively high resistance where it is exposed on the periphery of the surveyed area.

The uniformity of the resistance readings across the midden area can be attributed to the thickness of the deposit and to its age of approximately 4,000 years for the lower portion. This determination is based on the absence of pottery in the bottom 8 inches of midden, although sherds were present in the plow azone. This site is undoubtedly of great archaeological importance and should be properly excavated and reported upon by professional archaeologists.

For future reference the author submits the following observations and postulations regarding the McGraw Garden Site:

1. Table I sets forth the material found in the test excavations made in each anomaly.
2. Fire-cracked rocks were collected from controlled areas of midden volume. It has been calculated that the 20 inch thick midden contains 3.1% fire-cracked rock.
3. Over 70% of the fire-cracked rocks show evidence of some utilitarian purpose. Abrading marks, small ovate

pits, and larger hemispherical pits were noted (Fig. 14).

4. Whole stones recovered averaged 3½ inches in length and 2 inches in diameter. Most were nearly ovate, similar to ones that can be found in many stream beds. They are probably of glacial origin.
5. The proximity of the Scioto River during prehistoric times coupled with the quantity of "net sinkers" indicates that a major fishing industry existed at the McGraw Garden site.

Acknowledgments: I wish to thank the Baker family and Don Kegg for helping in this experiment, Bob Converse for identification of some flint types, Dr. John E. Blank for personal communications, and Alva McGraw for permission to conduct tests with the Earth Resistivity Archaeometer and for the information he has volunteered and the cooperation extended.

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Stout, Wilber and R. A. Schoenlaub
1945 The Occurrence of Flint in Ohio. *Geological Survey of Ohio, Fourth Series, Bulletin 46.* Columbus.

ITEM	NO.	DATA
ANOMALY #1		**12" to 20"**
FLINT	14	Flakes, nodular
	5	Flakes, Flint Ridge
	1	Flake, Zaleski
	1	Scraper, Brush Creek (Fig. 6), Hafter (?)
STONE	1	Net sinker, sandstone (Fig. 6)
BONE	1	Lower mandible, Muskrat (Ondatra zibethica)
		20" to 30" (Hearth)
STONE	1	Striking platform, quartzite, 9.3cm x 5.4cm dia.
	1	Net sinker, sandstone, grooved
ANOMALY #2		**12" to 20"**
FLINT	5	Flakes, nodular
BONE	1	Deer, foot, calcined
	1	Deer, fragment, calcined
STONE	44	Fire-cracked (Fig. 8)
	1	Pitted, lesser quartzite (Fig. 9)
	1	Pestel, igneous, fire-crazed (Fig. 9)
		20" to 32" (Hearth)
FLINT	6	Flakes, chert
	1	Blade, triangular, brown-gray, 19mm x 31mm (Fig. 10)
ANOMALY #3		**12" to 18"**
FLINT	12	Flakes, nodular
	1	Flake, Zaleski
	1	Flake, Flint Ridge
	1	Blade, large, broken, nodular (Fig. 13)
	1	Drill, broken, Kanawha
	1	Point tip, chert
	1	Point, unfinished, Zaleski outcrop
	1	Hammerstone, nodular
		18" to 23"
FLINT	33	Flakes, chert
	8	Flakes, Vanport black
	2	Flakes, Zaleski
	2	Flakes, Flint Ridge
	1	Flake, Bursh Creek
	1	Point tip, chert
STONE	1	Hammerstone, igneous, fire-cracked
	1	Pitted, granite, 2 pits, polished one side
		23" to 30"
FLINT	10	Flakes, nodular
	4	Flakes, Flint Ridge
	2	Flakes, chert
	1	Flake, Kanawha
	1	Point, broken, Kanawha (Fig. 13)
	1	Point, corner-notched, broken, Zaleski, 15.5mm wide-11mm basal width (Fig. 13)
	1	Point tip, Zaleski (?) (Fig. 13)
STONE	4	Net sinkers, 3 sandstone, 1 slate (Fig. 14)
	1	Abrading, sandstone, 138mm long (Fig. 14)

Table 1: Material recovered from test excavations made at each anomaly. Identifications were made with the aid of Brainerd (1939), Converse (1963, 1966), Ritchie (1965), and Stout and Schoenlaub (1945).

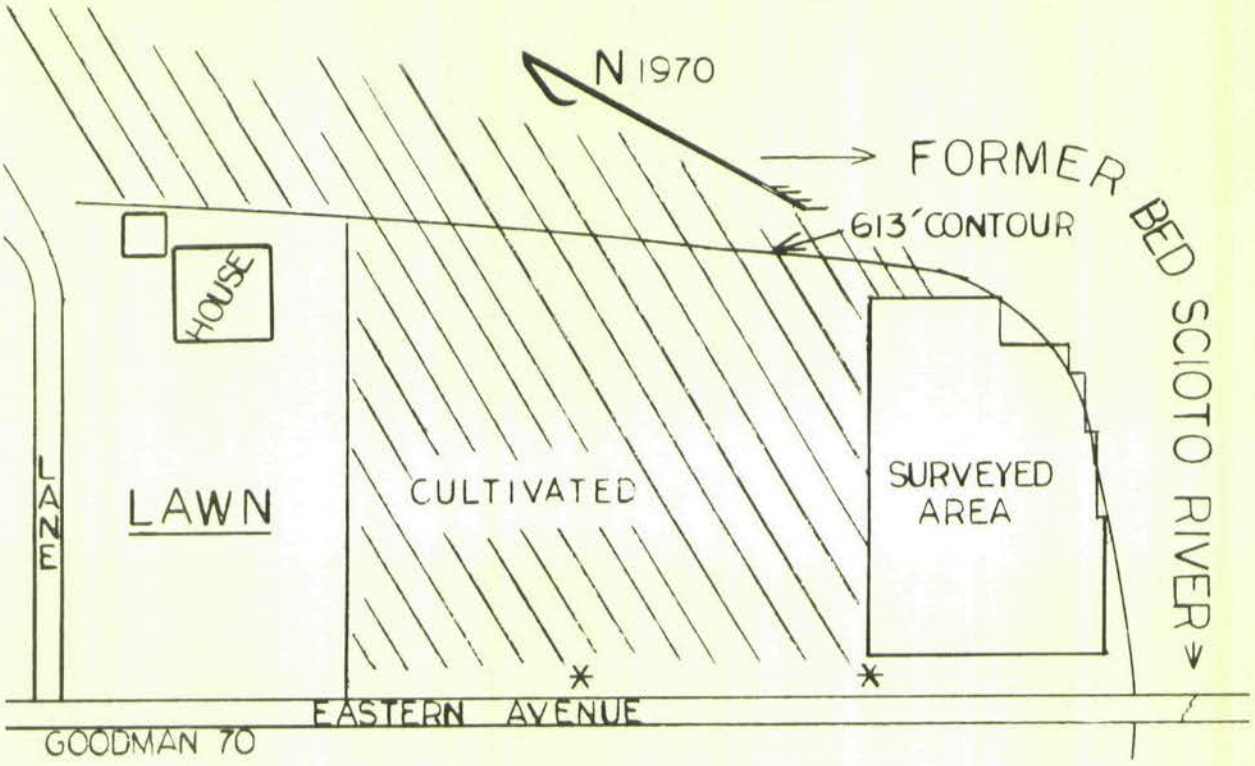


Fig. 1 (Goodman) Plan of the McGraw Garden site. The asterisks indicate the location of utility poles.

Fig. 2 (Goodman) The McGraw Garden site looking northeast. Anomaly #3 is in the foreground.

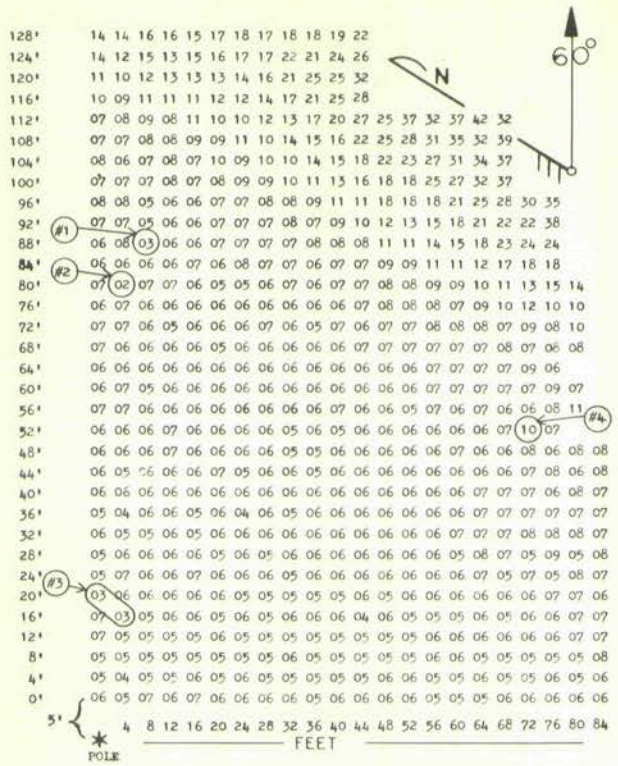


Fig. 3 (Goodman) Resistivity readings at the McGraw Garden site.

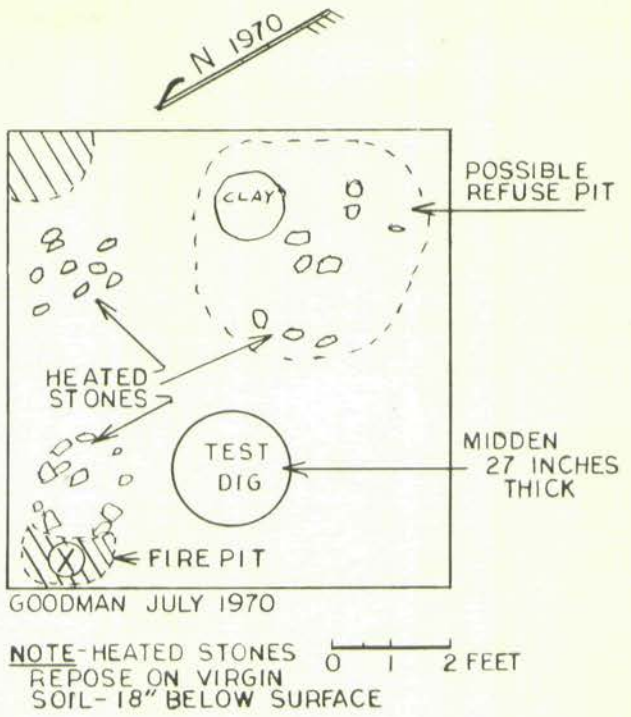


Fig. 4 (Goodman) Anomaly #4, indicated by the circle and x, and related features.

Fig. 5 (Goodman) Dennis Baker trowelling near Anomaly #1 located in lower left corner of the excavation.

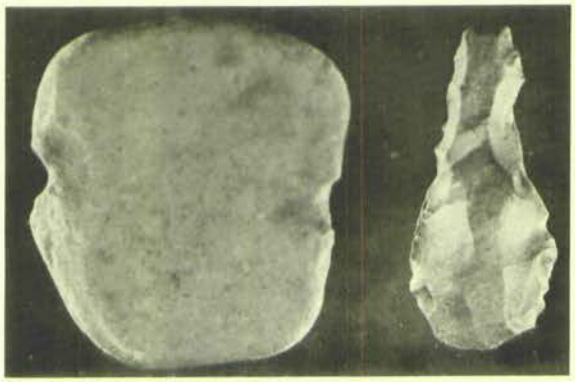


Fig. 6 (Goodman) Net sinker and scraper from Anomaly #1.

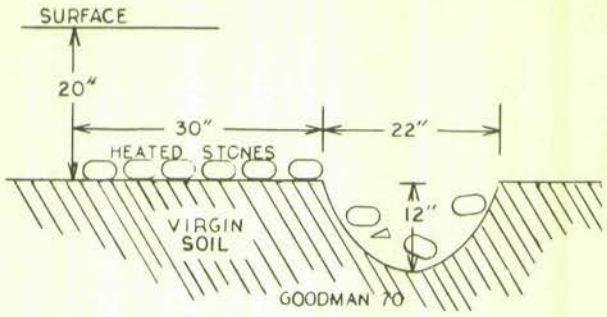


Fig. 7 (Goodman) Cross Section of Anomaly #2.

Fig. 8 (Goodman) Circle of fire-cracked stones lying on undistrubed soil adjacent to Anomaly #2.

Fig. 9 (Goodman) Pitted stone and pestle from Anomaly #2.

Fig. 10 (Goodman) Triangular blade from hearth near Anomaly #2.

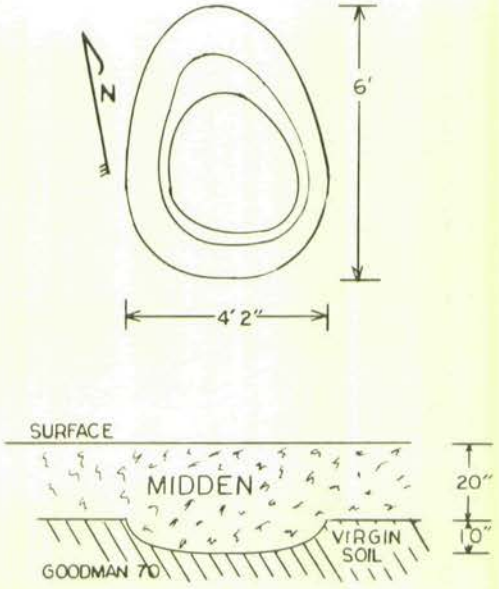


Fig. 11 (Goodman) Plan view and cross section of Anomaly #3.

Fig. 12 (Goodman) Dana Baker working in Anomaly #3. Note the abundance of fire-cracked rock around the pit.

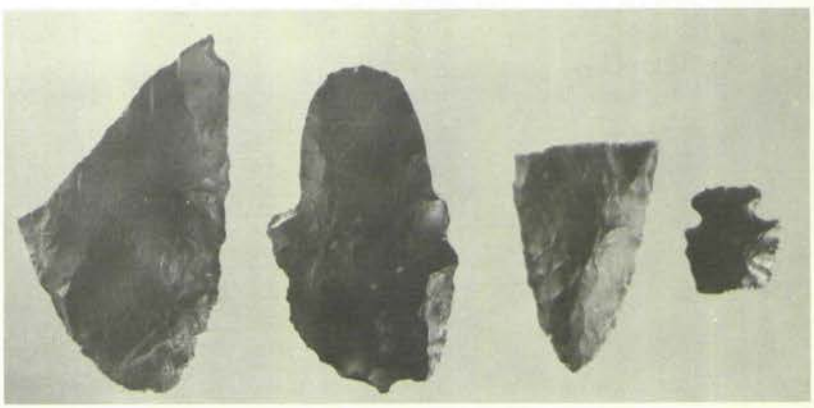


Fig. 13 (Goodman) Flint artifacts from Anomaly #3.

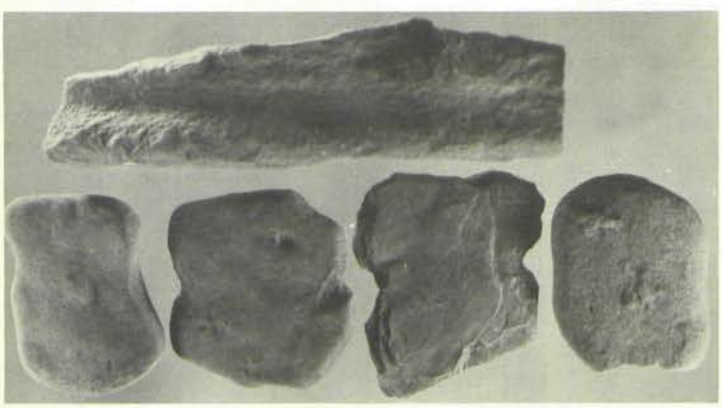


Fig. 14 (Goodman) Abrading stone and net sinkers from Anomaly #3.

A Sandstone Effigy Pipe

by
Harold D. Bender
1330 Grandview Avenue
Portsmouth, Ohio

This sandstone effigy pipe was found in 1928 at Fox Field, Mason County, Kentucky, a well known Fort Ancient location. It depicts the effigy of a human face by deeply incised lines and concavities. The weeping eye design is a motif usually found in such pipes.

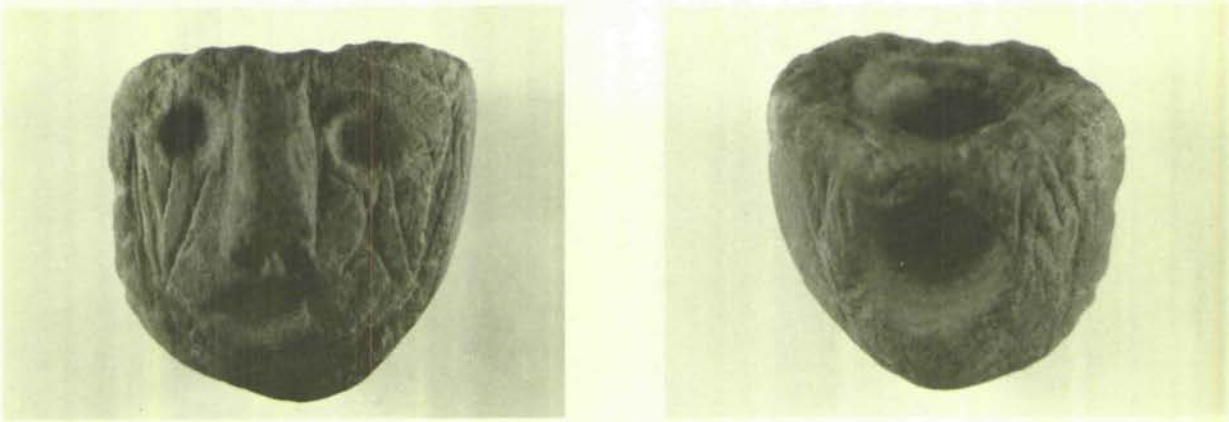
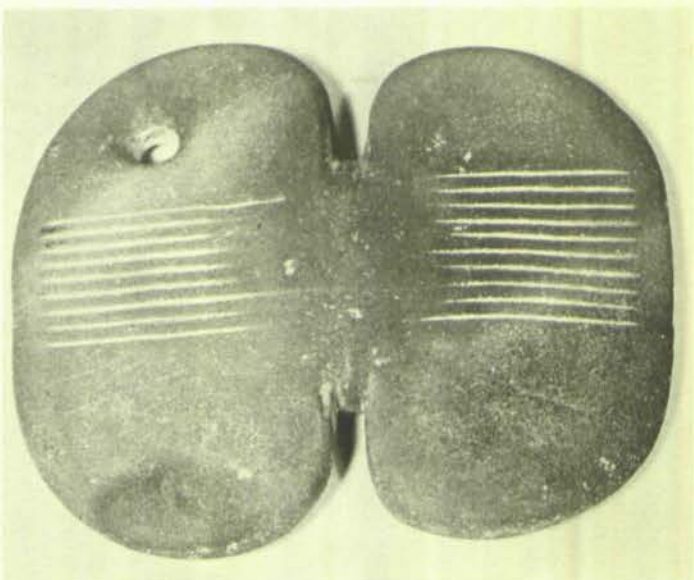


Fig. 1 (Bender) Front and top view of a Fort Ancient effigy pipe.

A Notched Bipennate from Northeastern Ohio

A picture of this artifact and a letter asking about its origin and authenticity was sent to your Editor from ASO member Harry T. Phillis of Amsterdam, Ohio. It was given to him by a friend who found it in a cornfield near Magnolia, Ohio. Having been unsuccessful in learning anything about it he asked if any of our members could help him identify it. Both the letter and picture were sent to Dr. Gordon F. Meuser of Columbus, Ohio, who is foremost among Ohio slate and stone collectors, for his help. His comments were as follows: "The artifact is evidently a notched (instead of drilled) bipennated form. I have several of them and all but one are rather crude - none of them are decorated - a very interesting piece".

The artifact is nearly 4 inches in width and is made of a dark colored sandstone.



Fluted Ax Fragment from Hamilton County

by
Raymond Tanner

In the spring of 1965, I was surface hunting along the Great Miami River in Hamilton County when I found a very unusual artifact. Among a pile of drift wood mixed with corn cobs, glass, light bulbs, and other debris was the bit end of either an ax or celt (Fig. 1). When I removed it from the muck, it seemed to be nothing more than another broken artifact. When I cleaned it later, I noticed that there was a groove on both sides in a fairly uniform manner. The artifact possibly could have been a much larger one that had been broken and then reworked because the poll area and the grooves are just pecked but not ground. However, the bit of the fragment had an old, dull polish. Why the owner or owners would put two flutes into the piece, I do not know.

The total length of the fragment is 2-7/8 inches and the total width is 2-3/4 inches. It is 1-1/4 inches thick. The widest point on both the grooves is 5/8 inch. The longer groove is 2-1/4 inches, and the shorter one is 1-7/8 inches long.

There may be some connection between this artifact and the fluted axes of Michigan, but it does not resemble any of the Michigan axes I have had the occasion to see. If the editor or any member of the Society has an artifact similar to mine, or knows of any publication that night show similar artifacts, I would appreciate their help. So far, it appears that this particular specimen is a unique piece from southwestern Ohio.

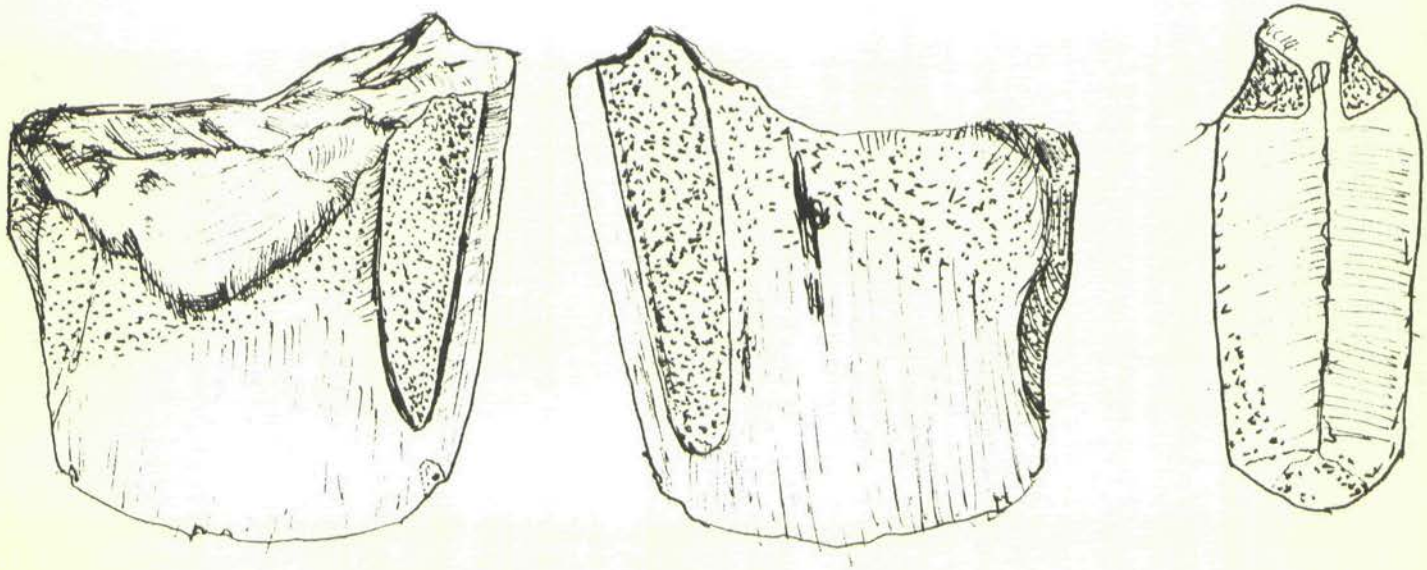


Fig. 1 (Tanner) Obverse and reverse faces, and edge view of a fluted ax fragment.

The Southeastern Ceremonial Complex in Northern Ohio

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Case Western Reserve University
Cleveland, Ohio
44106

During the summer of 1971 excavations at the South Park site near Independence in Cuyahoga County, Ohio, revealed an example of one of the most intriguing and controversial archaeological manifestations of the eastern United States: the Southeastern Ceremonial Complex. This complex is known to include carved and engraved conch shell masks and gorgets; embossed and engraved copper pendants, headdresses, and plates; monolithic polished stone axes and batons; elaborate chipped-stone blades, maces and animal effigies; engraved polished stone celts and gorgets; semi-precious stone statuettes; and painted and effigy pipes and pottery (Willey, 1966: 300-306). These items bear stylized designs which clearly relate to some religious ritual which displays a strong Mexican coloration. Among those recurrent motifs are crosses and swastikas within a sunburst or circle; fighting birds; spiders; human skulls and fleshed longbones; isolated "forked" or "weeping" eyes; feathered snakes; masked human-animal figures holding severed human heads and batons or knives; "bi-lobed arrows"; disjointed extended hands with an eye in the center; horned birds and men; and vivid scenes of human sacrifice (Waring and Holder, 1945; Hamilton, 1952).

For the most part these cult objects and designs are found in the southeast. Most often they are associated with elaborate high-status mortuary complexes in the major Mississippian temple and village sites such as at Moundville in Alabama (Moore, 1905; 1907) or at Etowah in Georgia (Moorehead, 1932; Kelly and Larson, 1957; Williams, 1968) although the largest single cache comes from the isolated mounds at the Spiro site in eastern Oklahoma (Hamilton, 1952; Brown, 1966, 1967). Cult objects and designs have been reported from as far northwest as central Nebraska (Strong, 1935) and in the Upper Mississippi-Ohio Valley area numerous examples are known from Mississippian centers such as Cahokia, Kincaid, and Angel (Ford and Willey 1941).

Earlier interpretations of this ceremonial complex regarded it as a native reaction to the first violent encounters with early European expeditions such as DeSoto (*c.f.* Griffin, 1944); others felt it was either the result of direct Mexican contact (McNeish, 1947), or that the Southern Cult represented local development of themes which had their prototypes in earlier cults such as Ohio Hopewell (Kreiger, 1945) although the strong similarity of the Southeastern Cult material with Mexican ceremonial phenomena somewhat weakens this latter suggestion. At present most archaeologists would probably accept this ceremonial complex as an example of some significant form of Mesoamerican influence on a Middle Mississippian tradition, itself a blend of Mexican ideas and local developments following the Burial Mound (Adena-Hopewell) period in the eastern United States.

The contention that the Southeastern Ceremonial Complex represents a Ghost Dance-like movement in reaction to Europeans has become difficult to maintain since the radiocarbon dating has shown that the florescence of this cult occurred late in the fifteenth century A.D , so that its origins clearly must be pre-Columbian (Howard 1968).

Two of these common Southern Cult motifs, the "weeping eye" and the human hand with an eye in the center, were found engraved on a broken celt recovered from a deep storage pit assigned th the latest occupation of a Whittlesey Focus (Greenman, 1937) site in northeastern Ohio.

The celt itself is composed of a dark gray shale. It is bi-convex with a rounded bit and was manufactured by grinding and polishing. Microscopic analysis (45x) failed to reveal any striations which could be assigned to use rather than to final manufacturing processes. The celt has a maximum length of 70.5 mm, a maximum width of 58 mm, and a maximum thickness of 20.3 mm. While the original celt was previously longer than present, width and thickness maxima did not lie along the broken edge and would not have been exceeded on the complete artifact. With the exception of the engraving, this celt is similar to countless

others from Fort Ancient (Griffin, 1943), Whittlesey (Greenman, 1935, 1937; Morgan and Ellis, 1943), and Iroquoian sites (Ritchie, 1944, 1969) in the lower Great Lakes region.

Engraved on the reverse side is an off-center representation of a single "Forked" or "Weeping Eye" 51 mm by 29 mm, similar to the isolated shell engravings from Spiro (Waring and Holder, 1945: Figure 2, n.d.), or the Shell Mask Gorgets from Fox Farm in Kentucky (Griffin, 1943: Pl. CXXL, 3), or from the Dumaw Creek site in Michigan (Quimby, 1968). On the obverse side of the selt is a centered engraving of an extended human hand, 39 mm wide, with neither nails nor volar markings represented. The hand is 41 mm long from the tip of the third finger to where the broken edge of the celt crosses the center of the palm or back just below a portion of a curvelinear line. This clearly represents the Hand-and-Eye described by Waring and Holder (1945: Figure 2, IV) as one of the major motifs of the ceremonial complex.

The execution of these engraved designs is careless. The width of the engraved lines varies from .6 mm to .2 mm while their depth varies from .4 mm to nothing. The deepest and widest sections of the engraved line are usually markedly assymetrical and are occasionally terminated with small shatter-lines and step-flakes scars. These are often the areas where another lighter line is superimposed above the earlier line. Such superimposed lines are common, especially in curved regions of the engraving. The impression is of a rather crude attempt at free hand engraving, by means of a hand-held flint burin, the leading edge of which occasionally slipped or shattered.

The lower margin of the "Weeping Eye" and the lower half (?) of the Hand-and-Eye are abruptly terminated by the broken edge of the celt, clearly indicating that the engraving was accomplished before breakage occurred. No striations of any kind overlie the engraved lines and their edges are rather sharp and angular indicating that no further working of the celt had taken place after the engraving. All indications point to the probability that the celt was broken immediately before a second matching, "Weeping Eye" could be engraved on the reverse face, and before the entire design had been completed.

Waring's summary of the 1954 Moundsville Meeting (in Williams [ed.], 1968: 90-92) postulated a Formative Phase for the Southeastern Ceremonial Complex with general roots in Middle Mississippiam ideology and ritual. The Developed phase is represented by the "classic cult" materials, often as elaborate mortuary associations while a late Attenuated phase is characterized by more common use of "cult" motifs which have become quite conventionalized. Waring felt that the weeping-eye mask gorget could serve as a horizon marker of this late phase. This assumption may be strengthened by a radiocarbon date (M-2271) corrected by the Seuss charts (1968) to the sixteenth century A.D. This date appears to have come from a storage pit relating to the same final aboriginal component at South Part which represents a good sized agricultural village with year-round occupation (Brose, n.d.).

The ceramics recovered from this component relate most strongly to Iroquoian sites located in the eastern Lake Erie region. Those sites are dated at A.D. 1400-1550. The earlier levels at South Park displayed a number of material cultural styles indicating strong influence from Mississippian centers in southern Ohio, further emphasizing the attenuated nature of the motifs encountered on the celt previously described.

No archaeological evidence of the complexities of Southern Cult ritual exists in the region of northeast Ohio: status burials, temple-mound architecture, planned village orientation, and strong social stratification are all unknown. Thus the nature and extent of the contacts existing between northeastern Ohio and the Southeast in general at this late perhistoric period remain unclear. What is certain, however, is the fact that the traditional picture of the Indians of the Great Lakes as simple farmers-hunters-fishermen, contrasted with the quasi-theocratic towns of the highly agricultural Indians of the Southeast, ia an over-simplification, the magnitude of which is only now becoming clear.

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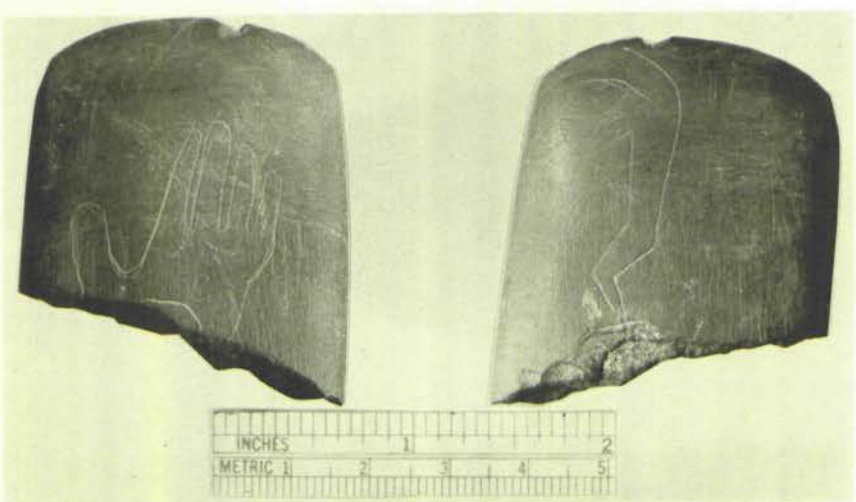


Fig. 1 (Brose) Engraved broken celt from a Whittlesey Focus site in northern Ohio.

Scioto-McGraw

by
Kenneth C. Goodman
2528 Swansea Road
Columbus, Ohio 43221

A team consisting of an excavator and an observer has been exposing and noting archaeological information near the southeast city limits of Chillicothe, Ross County, Ohio. The senior member of this team, the Scioto River, meanders in the form of a large omega on the farm of Alva McGraw, the junior member. At the downstream point of this configuration, the Scioto is eroding the bank during each high-water occurence.

During July 1970, while surveying the McGraw garden site (Goodman 1971:), Alva McGraw mentioned to Dana Baker and the author that he had seen a bone awl exposed on the bank of the river. We took a break from our digging and went with Alva to observe his discovery *in situ*. The large bone awl (Fig. 1) was fully exposed approximately 3½ feet below the surface and rested nearly vertically on the river cut.

McGraw has been fascinated by the strata exposed by the swift currents of the high water and has dug several hearths which have been exposed over the years. In 1968, stones and charcoal had been exposed approximately 8 feet below the surface; McGraw permitted me to explore this hearth. More than half of a circle of stones has been washed away, however, it is estimated that the hearth had been 30 inches in diameter. It consisted of some 40 stones averaging 3½ inches long and 2 inches in diameter.

When first exposed, the stones, covered with alluvial deposits, looked very much like baked potatoes. The action of heat had formed a sheath about the inner portion and when the stones cracked exposing a near white interior, the illusion was complete (Fig. 2). Curious about these stones because similar ones had not been observed on the adjacent gravel bars, I consulted Pauline Smyth, geologist, Ohio Division Geological Survey. Miss Smyth stated that the sample was limestone and that the nearest deposit was several miles upstream from the point of discovery.

Alva McGraw is ever hopeful that one day the Scioto will expose a limestone hearth with an artifact in association so that an approximate date for the hearth builders can be obtained.

Goodman, Kenneth C.
1971 The McGraw Garden Site: An Earth Resistivity Survey Experiment. *Ohio Archaeologist,* Vol. 21, No. 4, pp.

Fig. 1 (Goodman) Alva McGraw holding "river bank" awl, Dana Baker on right. Awl was reposing in depression behind McGraw's hand.

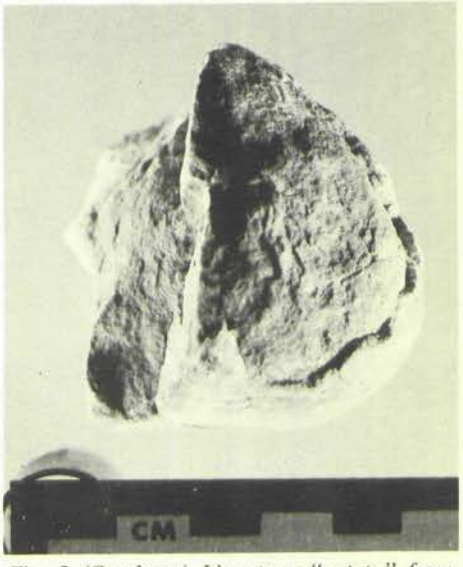


Fig. 2 (Goodman) Limestone "potato" from hearth exposed in river bank by the Scioto.

A Fluted Point from Knox County

by
Wesley Clarke
210 Central Avenue
Westerville, Ohio 43081

The fluted point pictured in Figure 1 was found in Knox County, Ohio, six miles south of Mr. Vernon by Robert Champion in February 1971. It is now in the author's collection.

According to Prufer and Baby's system this point may be classified as Type 1, convex-parallel-sided (Prufer and Baby 1963: 13). It is made of pinkish gray Delaware Chert and is two inches in length. Small amounts of grinding are present around the basal ears and a single flute extends 1 1/16 inches from the base on the obverse. At least four basal thinning flakes are present on the reverse.

As of 1963 Prufer and Baby list nine fluted points as having been found in Knox County, of which five were of convex-parallel-sided type (Prufer and Baby 1963: 26).

Prufer, Olaf H. and Raymond S. Baby
1963 *Palaeo-Indians of Ohio.* Ohio Historical Society; Columbus.

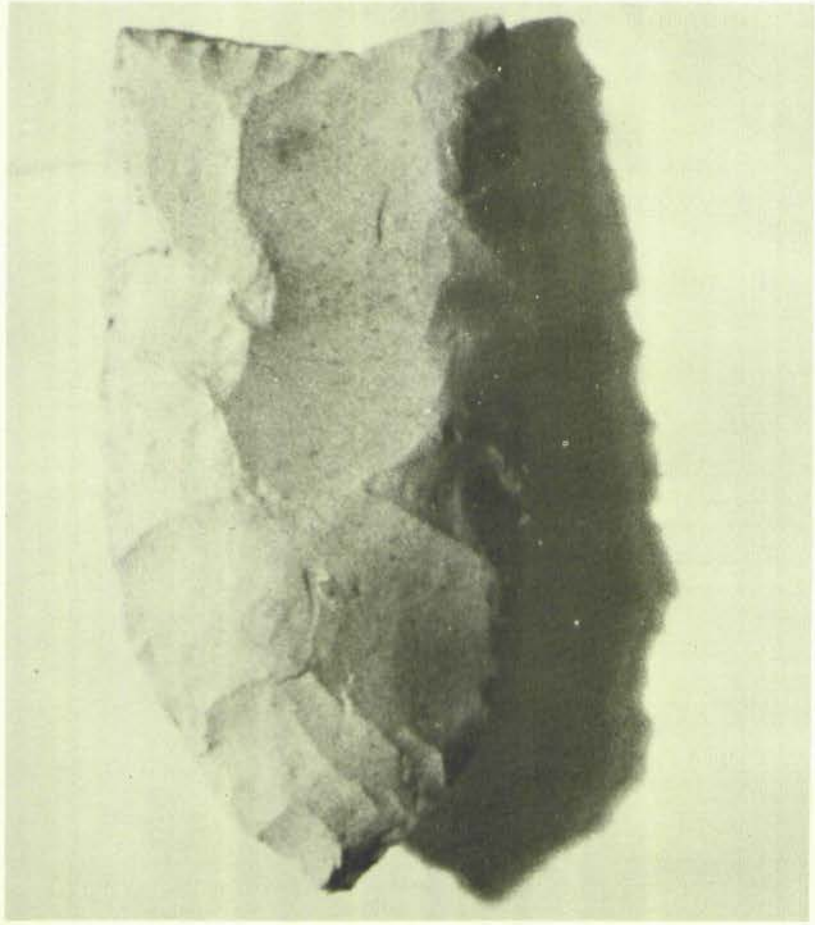


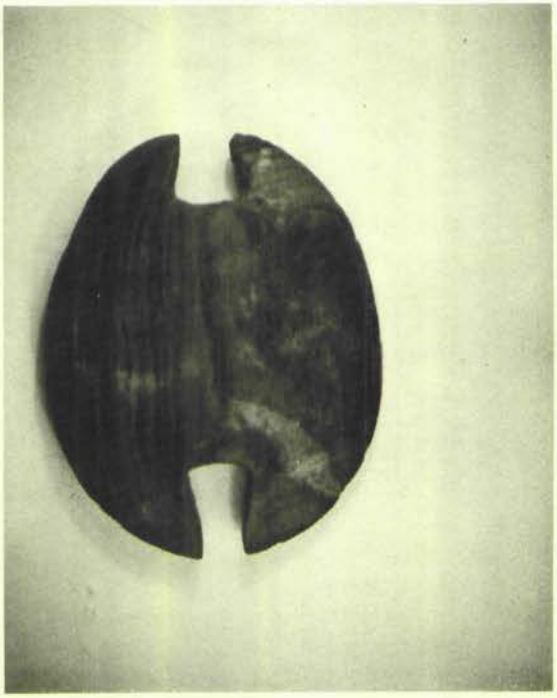
Fig. 1 (Clarke) A fluted point from Knox, County, Ohio.

Artifacts from the Collection of Max Shipley

A recent trip to the home of Max Shipley of Columbus, Ohio, produced the accompanying photographs of some fine Ohio artifacts. His father, Frank Shipley - deceased - was an early Ohio collector whose collection was passed on to his sons Max and Dwight, both ASO members. Max Shipley may be better know as one of the country's foremost taxidermists. His collection of Indian artifacts in extensive and contains many fine and unique examples.

Fig. 1 (Shipley) This stone axe was found in Franklin Township, Franklin County, Ohio in the year 1880. It is finely fashioned and symmetrical and weighs nearly five pounds. The material is a dark gabbro-like stone of brownish-black color.

Fig. 2 (Shipley) An extremely large knife made of Delaware chert is shown. This is an uncommon knife type and is sharpened primarily on the inner edge while the curved edge is less sharp. It was found in Mound # 25 at the Mound City Group in the year 1901. It is 9 inches in length.



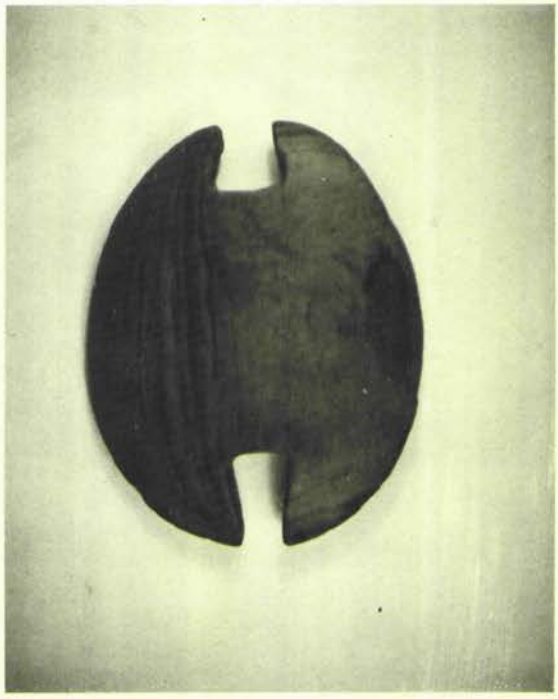


Fig. 3 (Shipley) A notched-ovate bannerstone from central Ohio is shown in both the obverse and reverse. The heavily patinated side has a lighter inclusion in the banded slate from which it is made.

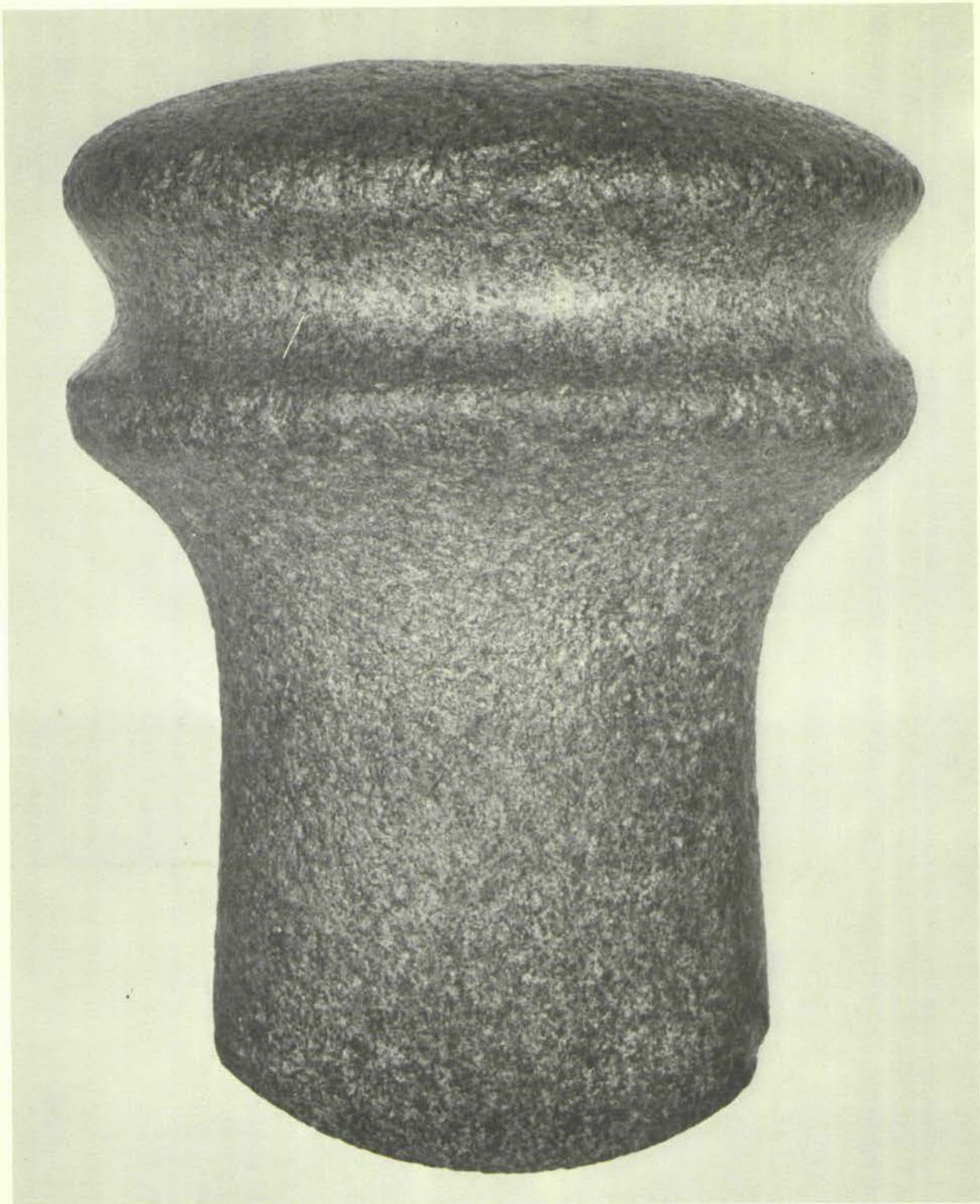


Fig. 4 (Shipley) This uncommon axe type was found along the Miami River in Montgomery County, Ohio. It is made from a compact granite and is polished to a smooth finish.

Fig. 5 (Shipley) Two views of a fine trophy axe are shown. This classic example of the type was found near Westerville in Franklin County, Ohio. Typical are the conical pole, well developed groove, and blunted bit. It is made from a honey colored quartzite.

A New Bifurcated Point for Ohio

by
Jerry Hastings
Route #1, Box 411A-1
Ironton, Ohio 45638

The writer is describing in this paper a new bifurcated point for Ohio which he has named the Lawrence Broad Blade Bifurcated point because the first two specimens of this type were discovered on a surface site in Lawrence County. This type is described below for the purpose of placing it in the literature, and the writer hopes that additional information on this type will be furnished to him by other A. S. O. members.

LAWRENCE BROAD BLADE BIFURCATED
(Tentative Type)

Type Description: Hastings, this paper.
Sample Size: 5
Size: About 43-67 mm. long; 33-43 wide; 7-12 mm. thick.
Form: Broad, triangular blade formed by random flaking and followed by fine pressure retouch along blade edges. Blade edges are excurvate or straight, and blade is generally flat in cross section. Tips are broad and seem in most cases not to be off center.

Shoulders, at right angles to the stem, are wide and pronounced. on some specimens the shoulders may slope slightly toward the tip.

Stems expand slightly toward the shoulders, although an occasional specimen may have a straight-sided stem. Bases are concave and thinned by the removal of numerous flakes from both sides of the stem. The base of the stem, the sides of the stem, and the shoulders are smoothed by moderate basal grinding.

Material: One Jackson County specimen is made from a low grade of gray Zaleski flint, two specimens from Ross and Meigs counties are made from river pebble chert, and two Lawrence County specimens are made from Brush Creek flint.

Comments: This medium to large-sized, broad-bladed bifurcated point is distributed sporadically across southern Ohio and does not seem to be common. It is a distinct type which cannot be subsumed under any of the other known bifurcated types which occur in the Ohio area.

Chronological Position: Early Archaic. Found only on surface sites which have yielded a fairly wide range of other Early Archaic projectile point types.

Distribution in Ohio: Unknown at the present time except for two specimens from Lawrence County, and one each from Meigs, Jackson, and Ross Counties.

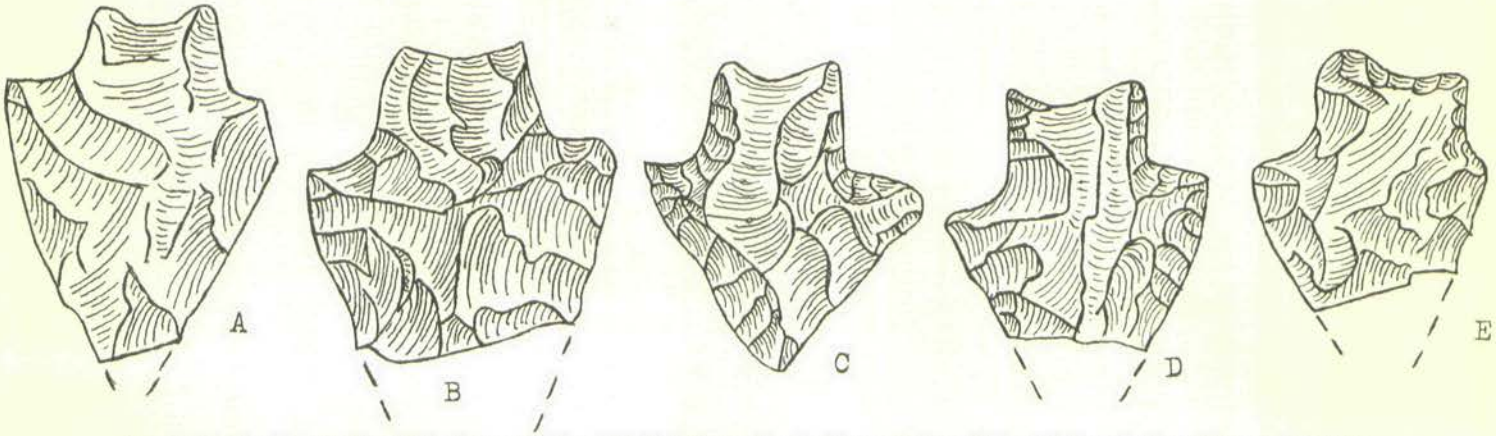
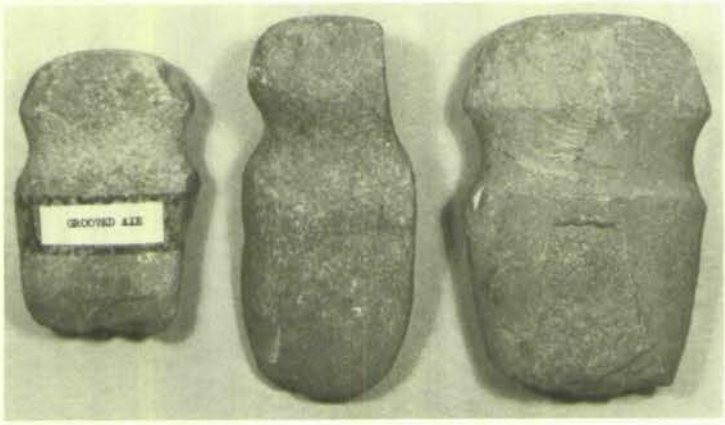


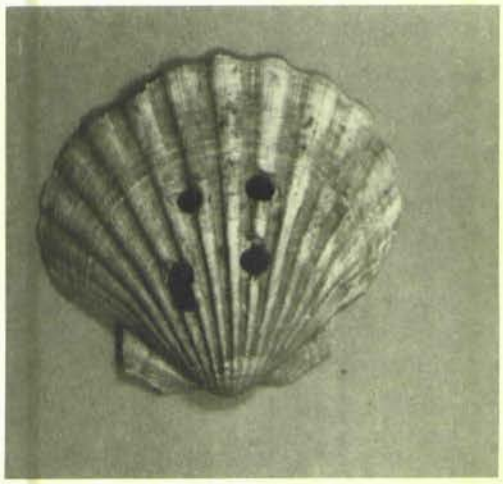
Fig. 1 (Hastings) Examples of the Lawrence Broad Blade Bifurcated point from southern Ohio. A is from Jackson County, B is from Meigs County, C is from Ross County, and D and E are from Lawrence County. (The drawings in this figure are full scale.)

Personal Finds from Wayne County

ASO member Dominic Tomasetti, Jr. of Wooster, Ohio, sends these pictures of some of his personal finds from the Wayne County area. He invites any of our members to stop for a visit to view his collection.



Grooved axes found in Wayne County, Wooster, Ohio.



Shell artifact - has four holes drilled through it. Found in Wayne County, Wooster, Ohio by Dominic Tomasetti.

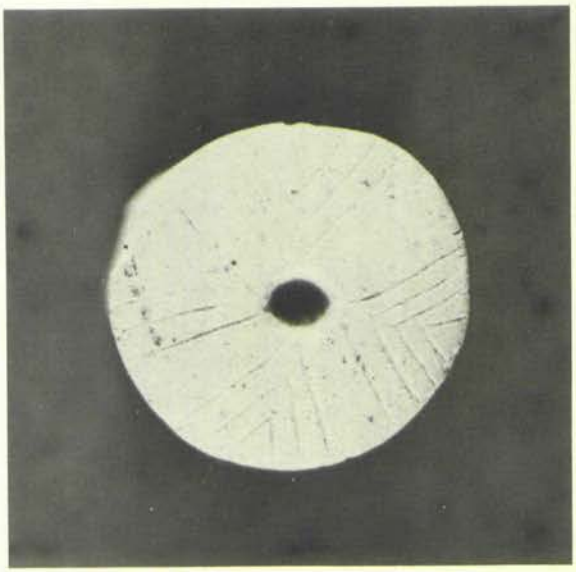
A real nice pestal shows indentation of the end found in Wayne County, Wooster, Ohio.

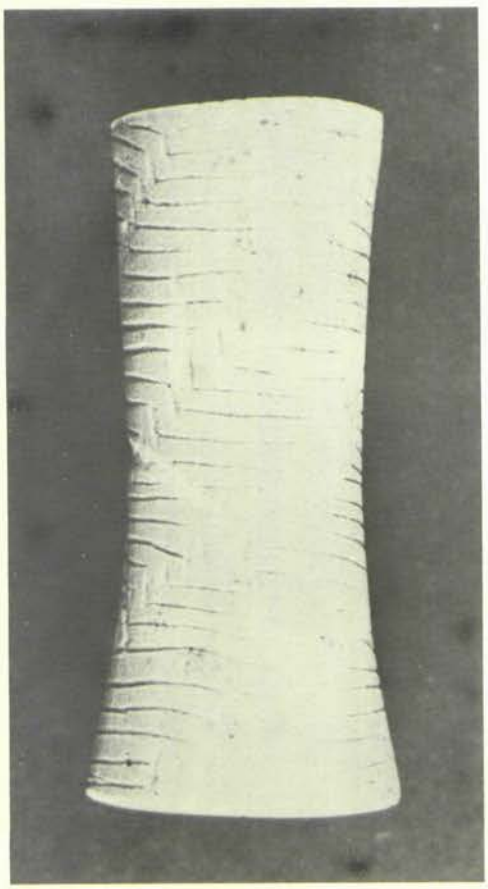
Celts found Wayne County, Wooster, Ohio.

A Sandstone Spool

by
Mr. & Mrs. Robert Sturm
94 E. Cleveland Ave.
Grove City, Ohio

Pictured are three views of a sandstone spool which was found near Leesburg in Highland County, Ohio. It is made of a buff colored sandstone and is heavily incised on all surfaces including each end. A small hole has been drilled in one end and extends for about 1 inch into the piece. The markings are angular and geometric and have no apparent meaning.





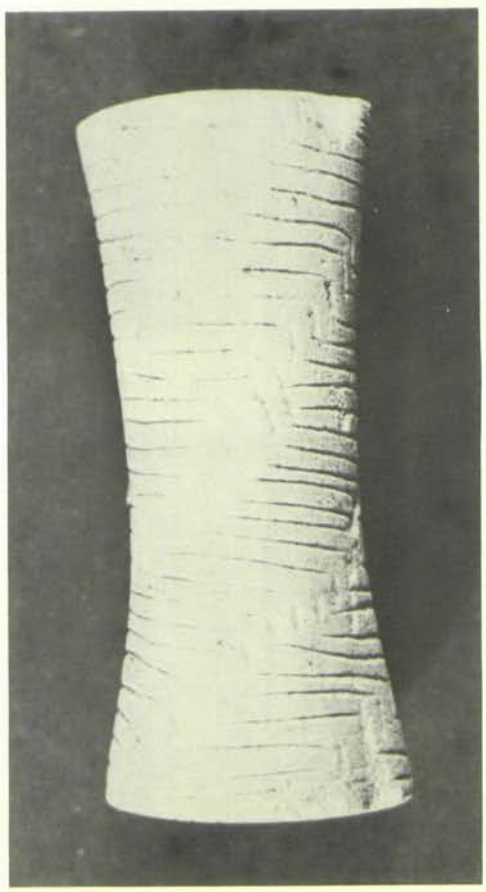


Fig. 1 (Sturm) Side views and end view of an engraved spool.

The First People Here Left It

by
Dr. John Haney
1004 S. 5th Street
Ironton, Ohio

Pictured in full size is a Paleo Lanceolate point found by the author on November 21, 1970. Location of the find was at the Feurt site near Route 23 north of Portsmouth, Ohio where a Scioto County sewage treatment plant is being built. Two piles of material had been excavated from a 20 foot deep hole, one containing top soil and abundant Fort Ancient material such a pottery fragments, bone tools, triangular projectile points, and beads. The other pile contained nearly pure gravel from the 3 or 4 foot level to the bottom of the excavation and was completely devoid of organic material. This gravel is Wisconsin glacial outwash according to Scioto County Engineer Harlan Danner. The lanceolate point, probably around 8,000 to 10,000 years old was found in the gravel and was completely covered with a sedimentary coating as may be seen in the photographs. Basal grinding is present and extends across the base and along both sides for about half its length.

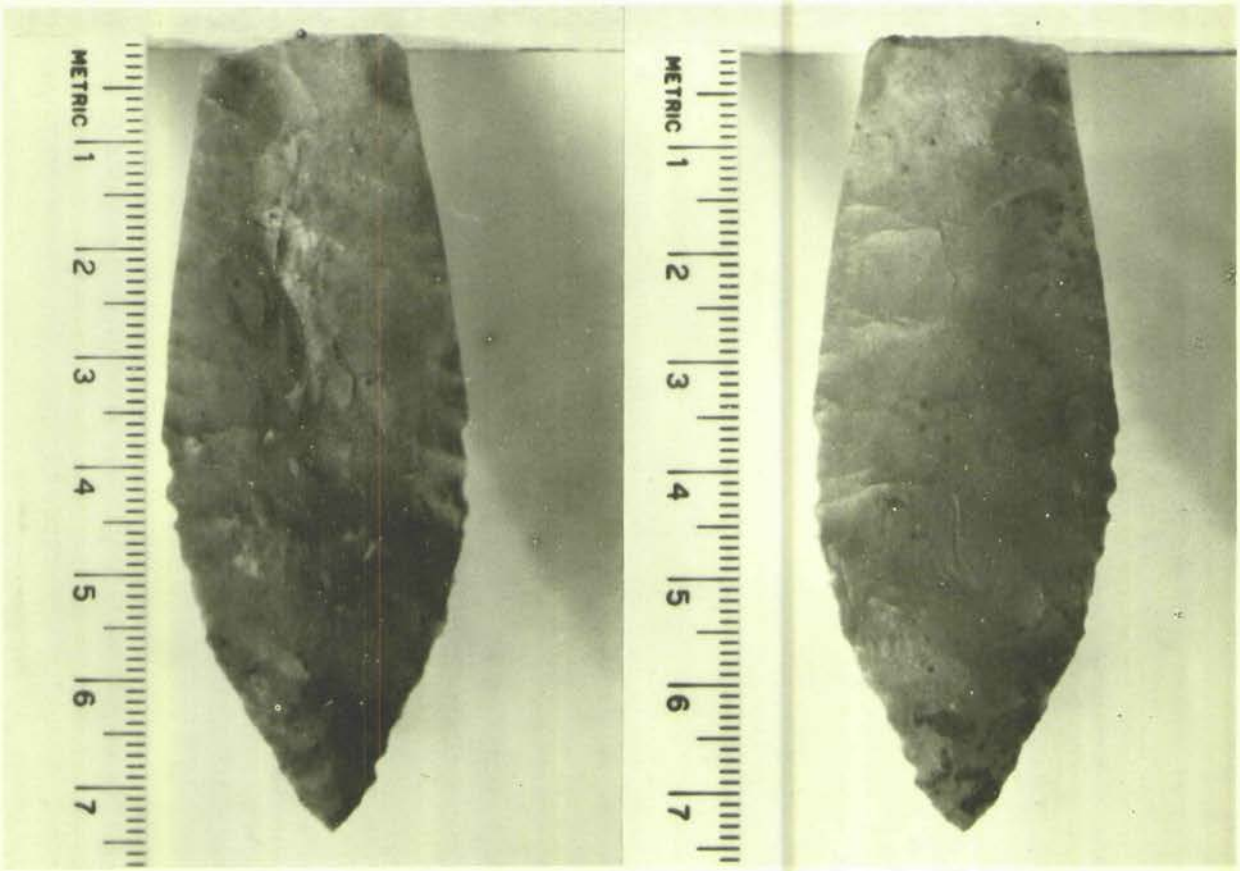


Fig. 1 (Haney) Obverse and reverse of a Paleo lanceolate point found at the Feurt site in Scioto County.

A Rare Bat Effigy Pipe

by
Robert N. Converse
Plain City, Ohio

A unique effigy pipe is pictured. It is the sculptured portrayal of the bat - an animal rarely found in prehistoric pipes or engravings. Although many animal motifs are found in effigy pipes this may be the only one of its kind found in Ohio. Despite the fact that neither the wings, feet, or other body elements are indicated in the sculpture, the head is unmistakably that of the flying mammal. Both the bowl and body of the pipe are rectangular and fashioned into an elbow design. It is carved from a glossy black steatite and is highly polished. Now in the collection of Dr. Gordon Meuser of Columbus, Ohio, it was found in Wayne County and has been in his possession for many years.

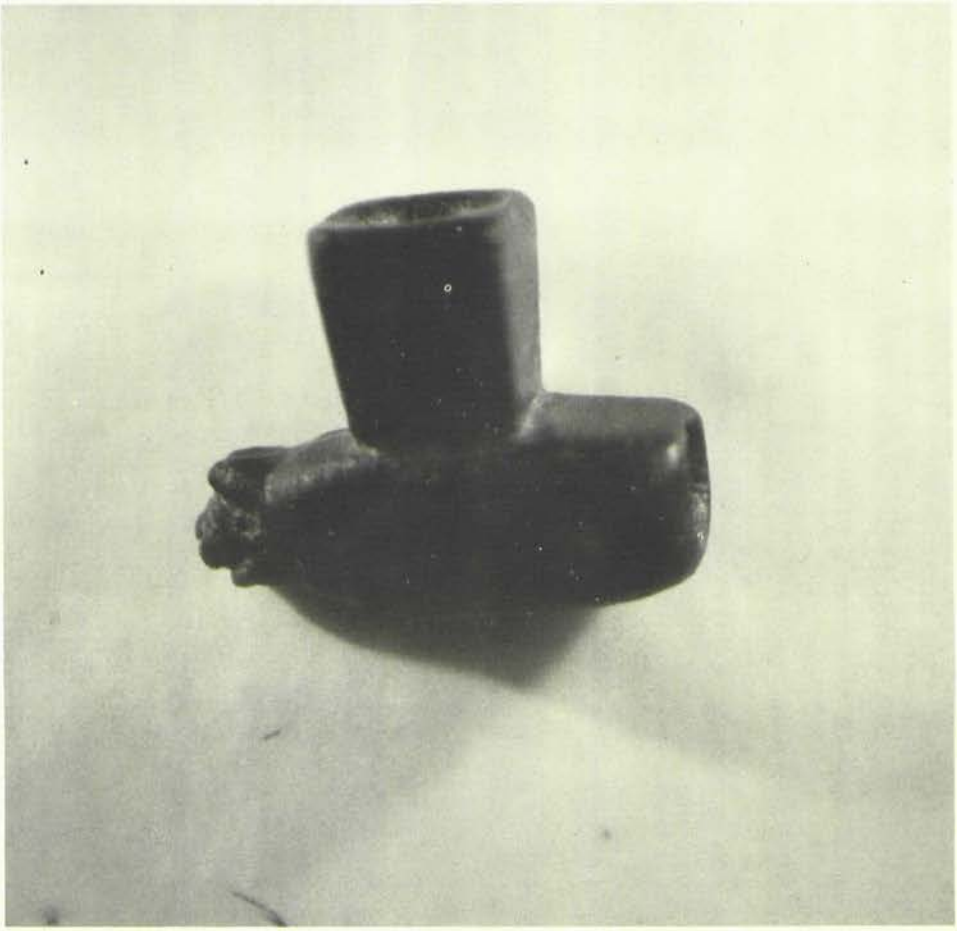


Fig. 1 (Converse) Photograph of Bat effigy pipe from the Meuser collection. It is approximately 3 inches in length and 3 inches high.

A Further Note on Fractured Base Points

by
John J. Winsch, M.D.
302 Demya Drive
San Antonio, Texas 78227

In his excellent description and discussion of the Fractured Base Point, Converse[1] states:

> "Basal treatment is of course the distinguishing feature. The base was prepared by removing two small flakes from the center of the stem leaving a somewhat bifurcated appearance. Two flakes were then directed from the edges of the stem to the indented center leaving a flat or "fractured" surface. The technique used to remove these two flakes is the same as that used to flatten the sides of some bifurcated points and is the same as that employed to produce burins."

To this, I would like to add an observation originally pointed out to me by Walt Sims, a long-time Ohio collector: on a number of the finest specimens of the type, two additional flakes have been removed from the center, making a total of four burin flakes. I have noted that the same use of four burin flakes often occurs on Lake Erie Bifurcated points. Although it is tempting to conclude that this similarity in technique might imply a common origin, there is no evidence, such as sites producing both types together, that this is the case.

Converse, Robert N. "Fractured Base Points." *Ohio Archaeologists,* Vol. 21, No. 3, p. 9.

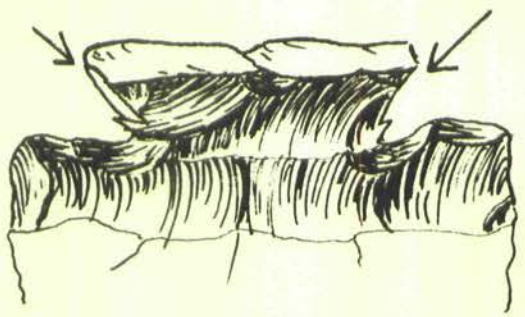


Fig. 1 (Winsch) Illustration showing where two additional burin flakes were removed on some Fractured Base Points.

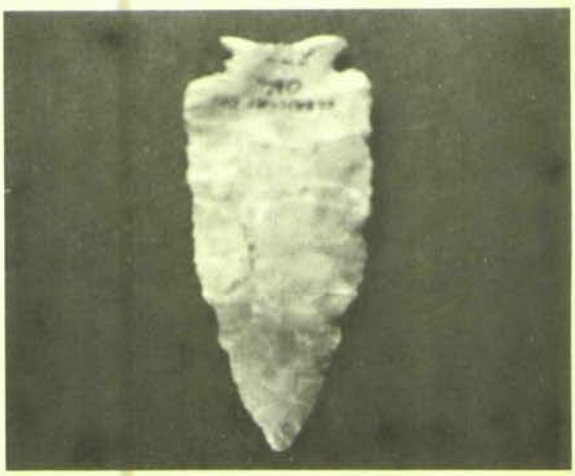


Fig. 2 (Winsch) Fractured Base Point with one burin flake removed from left side.

Book Review

Fitting, James E.
1970

The Archaeology of Michigan: A Guide to the Prehistory of the Great Lakes Region. Natural History Press, 501 Franklin Avenue, Garden City, New York, 11530. $18.95

The present study provides a "progress report of what is going on in Michigan Archaeology". Fitting has gathered together the research results of over fifty years of Michigan archaeology, with a great portion of the material resulting from both published and unpublished research that has been carried out within the last ten years. "Rather than being a totally original work, the present volume should be view as a syntheses; as one person's statement about the results of a group effort". (p. 1). Since the various field work was carried out over a number of years with a wide range of objectives, Fitting has utilized the theoretical framework of palaeo-ecological analysis set forth by Butzer (1964: 337-8) to unify the study. Butzer's work recognized the following categories of necessary environmental data:

1. "Understanding the *regional environment,* including climate, vegetation, soils, and geomorphic agencies".
2. "Understanding the regional food base or *'economic area'* ".
3. "Understanding the *local setting* of a site, i.e. location with respect to terrain, hydrography, ground water, and other local features".

Throughout the various chapters of this study, detailed consideration has been given to the local setting of the site and analysis of the regional environmental data based upon the previous work of Cleland (1966) and Yarnell (1964). Fitting (pp. 7-33) has provided a detailed description of the glacial geological sequence, the history of the glacial great lakes, and the modern rivers, lakes, climate, flora, and fauna of Michigan. However, this description of the modern regional environment of Michigan does not constitute a description of the regional environment during the prehistoric cultural sequence. Only brief consideration has been given to the distribution of palaeo-floras, and this has been based upon a synthesis of pollen spectra published by Cushing in 1965. Four palaeo-vegetational patterns have been recognized between 8,000 and 2,000 B.C. for the entire state of Michigan, but no consideration has been given to the micro-environment of the Palaeo-Indian or Archaic study localities, with the exception of the Shiwassee Embayment. The discussion of the palaeo-environment during the Early, Middle, and Late Woodland periods is much more complete and may provide useful hypotheses for further field research.

Several of the environmental interpretations of Palaeo-Indian and Archaic are considered to be poorly substantiated. It is reported that "in the eastern parts of North America there would have been an area of high Palaeo-Indian population density near the glacial fronts. Here the forest-tundra edge situation would allow for large groups of specialized hunters. Such sites as the Holcombe site in Michigan ... and the Debert site in Nova Scotia ... are representative of this peri-glacial hunting adaptation." (p. 37). Since only minimal faunal remains have been recovered from these two widely separated sites, the evidence for this generalization is considered to be highly tenuous. Although considerable surface remains for "Early and Middle Archaic" stage cultures have been found at surface sites in Michigan." ... no large permanent sites of these people have been found." (p. 67). While it is possible that these sites do exist and have not been discovered or that they were lake-shore locations that were covered by the rise of lake water from the Chippewa-Stanley low to the Nipissing level, these hypotheses are rejected. "The explanation I favor is that during the Early and Middle Archaic there were very few people in Michigan because the environments to which Archaic people were best adapted either did not exist or existed in more limited areas than they did after 3,000 B.C." (p.67).

An alternative hypothesis may be suggested. Although the Early and Middle Archaic cultures from the southeastern United States has been documented from a limited number of large, stratified sites (such

as Doerchuck, Hardaway, and St. Albans), these sites appear to be the exception rather than the norm. Many small, short term habitation and special purpose sites have been documented (Clayton 1965; Cambron and Walters 1959 and 1961; see Cambron and Hulse 1965 for additional references) for the southeastern portion of the Eastern Woodlands. However, it is the large stratified sites that are known to most archaeologists, unless they have specifically studied the Archaic cultural sequence of the Southeast, which have provided a biased view of settlement at this period of time. On the basis of the settlement pattern of the Southeast and supplementary data from Ohio (Blank 1970), it may be suggested that Early and Middle Archaic settlement pattern of Michigan may consist of a great number of small sites which are unstratified and which represent short-period occupation.

Fitting's consideration of the Late Archaic and Early Woodland cultural traditions in Michigan, primarily the Saginaw Valley, represents an up-to-date synthesis of the available information from a great number of sites. The archaeological reconstructions and faunal analysis from the Late Archaic Schmidt, Hart, and Feeheley sites have allowed the development of hypotheses concerning the settlement pattern and seasonal pattern of ecological adaptation in the Saginaw Bay region (pp. 68-80). The Early Woodland cultures are less well known and we are presented with a series of site descriptions that are not articulated by any framework.

The synthesis of the Middle and Late Woodland cultural phases and traditions represents, perhaps, the strongest feature of the work. Middle Woodland manifestations of Michigan have been divided into two contemporaneous manifestations, Hopewellian Middle Woodland and Lake Forest Middle Woodland. It would appear that these two cultural complexes constitute distinct cultural traditions, since they are characterized by distinct cultural traditions, since they are characterized by distinct patterns of ecological adaptation and display mutually exclusive geographical distributions; however, this point is not explicitly stated. On the basis of the evidence from the Norton mounds and the Spoonville village, Hopewellian Middle Woodland appears to have been based upon agriculture in the northern limits of the Carolina biotic province. The Lake Forest Middle Woodland was centered in the Carolinian-Canadian transition zone which was characterized by a specific flora and fauna. The economic basis of the Lake Forest Middle Woodland appears to have been oriented strongly toward fishing (pp. 97-98). The review of Hopewellian Middle Woodland has been subdivided into geographical areas — western Michigan and the Saginaw Valley — and the analysis consists of qualitative descriptions of the components. Quantitative information as to the frequency of artifact types is lacking. This section is very well illustrated, as is the entire work. However, the captions of many illustrations are very limited: ceramics are described by 'wares' and the individual pottery types are not specified, while stone tools are captioned in descriptive terms and are not assigned type names.

The analysis of Late Woodland cultures in Michigan constitutes the best documented and most clearly formulated section of the book. The advent of Late Woodland cultures has been correlated with the introduction of Eastern Complex corn at the end of the Scandian Climatic Episode and the beginning of the neo-Atlantic Climatic Episode between A.D. 800 and 900. Fitting (p. 145) reported that the Late Woodland cultural adaptations in Michigan "... were either agriculturally based or strongly dependent upon the presence of agriculturalists." The increased number and size of archaeological sites during the Late Woodland period in contrast to those of the Middle Woodland have been taken to indicate an increased population density. "This increased population density resulted from the efficiency of both agricultural adaptation and the channels through which agricultural products were distributed to non-agricultural areas". (p. 145). The following three economic adaptive patterns, which have historic parallels among the aboriginal groups encountered by the first Anglo-European settlers, have been isolated in distinct environmental zones of Michigan: the Miami Pattern in the Carolina Biotic province that was dependent upon agriculture; the Chippewa pattern in the Canadian Biotic province that was dependent upon hunting and fishing with large summer fishing villages and small winter camps; and the Ottawa

pattern located in the Carolina-Canadian Transition zone which in characterized by a shifting agricultural village pattern of settlement. The material cultural differences and the differences in ecological adaptation of regional Late Woodland groups are clearly discussed, and, while distinct cultural traditions and phases are described, the inter-relationships between the phases and traditions are not clearly delineated. This could have been easily accomplished diagramatically, similar to that of Ritchie (1969: xxxxxi)

In summary, *The Prehistory of Michigan* constitutes an excellent synthesis of the prehistoric cultural history of Michigan as it was known in 1970. The volume is concise in format and has been organized around an ecological theoretical framework that unites a large body of research that was carried out over fifty years. The work is abundantly illustrated with photographs and with numerous maps. Each section contains a map of the sites considered therein that is very helpful to one unfamiliar with the geography of Michigan in understanding the geographical relationships of the sites and the cultures concerned. A great number of the archaeological sites have been radiocarbon dated, and the cultural chronology is well documented in comparison to the chronology of surrounding states. All the radiocarbon dates from the archaeological sites in Michigan have been tabulated in an appendix (pp. 238-46). This is coupled with a very extensive bibliography, which makes this volume a necessary part of the library of serious students of Midwest archaeology.

Blank, J. E.

1970 *The Ohio Archaic: A Study in Culture History.* Ph.D. Thesis, Department of Anthropology, University of Massachusetts, Amherst.

Butzer, K. W.

1964 *Environment and Archaeology: An Introduction to Pleistocene Geography.* Aldine, Chicago.

Cambron, J. W. and D. C. Hulse

1965 *Handbook of Alabama Archaeology: Part 1 – Point Types.* Archaeological Research Associates of Alabama, Inc. University.

Cambron J. W. and S. A. Walters

1959 Flint Creek Rock Shelter (Part I). *Tennessee Archaeologist,* Vol. 15, No. 2, pp. 72-87. Knoxville.

1961 Flint Creek Rock Shelter (Part II). *Journal of Alabama Archaeology,* Vol. 7, No. 1, pp. 1-46. University.

Clayton, M. V.

1965 Bluff Shelter Excavations on Sand Mountain. *Journal of Alabama* Archaeology, Vol. 11, No. 1 pp. 1-98. University.

Cleleand, C. E.

1966 The Prehistoric Animal Ecology and Ethnozoology of the Upper Great Lakes Region. *Anthropological Papers, Museum of Anthropology, University of Michigan.* No. 29, pp. 1-294. Ann Arbor.

Ritchie, W. A.

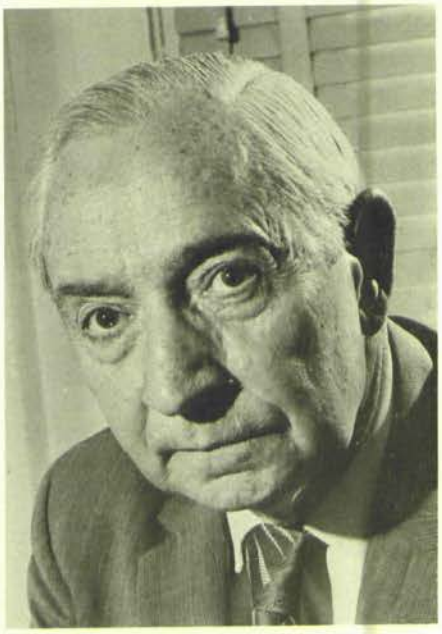
1969 *The Archaeology of New York State* (Revised Edition). Natural History Press. Garden City, New York.

Yarnell, R. A.

1964 Aboriginal Relationships Between Culture and Plant Life in The Upper Great Lakes Region. *Anthropology Papers, Museum of Anthropology, University of Michigan.* No. 23, pp. 1-218. An Arbor.

Reviewed by John Edward Blank
Assistant Professor
Department of Anthropology
Cleveland State University
Cleveland, Ohio 44115

Mr. Gilbert W. Dilley Elected Ohio Historical Society President



Mr. Gilbert Dilley, prominent Akron attorney, has been elected President of the Ohio Historical Society. Mr. Dilley has served as a Trustee since 1963.

Gilbert Dilley is well known to members of the Archaeological Society of Ohio and is one of the original members of our predecessor organization the Ohio Indian Relic Collectors Society which was founded in 1941. An avid and competent amateur archaeologist, he has had a lifelong interest in Ohio archaeology in general and Flint Ridge in particular. He is the owner of a large farm close to Clark's Corners at Flint Ridge and was instrumental in the acquisition of land and the the building of the Flint Ridge museum. He has a large collection of Fling Ridge material and has numerous cores of this colorful flint. In his 69 years he can claim a number of accomplishments, including acting as a one-man society for the prevention of cruelty to animals, and being instrumental in the naming of flint as Ohio's gem stone. He was a friend with such early Ohio archaeologists as William C. Mills, Henry Shetone, and Warren K. Moorehead.

Our congratulations go to Mr. Gilbert W. Dilley and to the Ohio Historical Society.

Awards

Winners of awards for displays at the September 19, 1971 meeting of the Ohio Archaeological Society at Mt. Vernon, Ohio are as follows:

Best of Show

Dr. John J. and William Haney
706 Buckhorn Street
Ironton, Ohio

Best Type

Dallas Burton
7715 Camargo Pike
Cincinnati, Ohio 45243

Necrology

Roy M. Parks
Bolivar, Ohio
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Dorothy Arbuckle
(sister of Julius Noebe, Exhibits Chairman)
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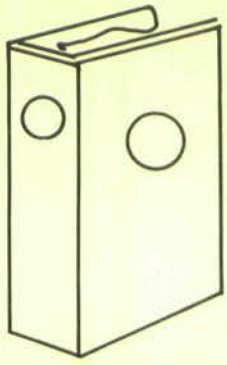

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Warren County Serpent Mound Special Issue		September, 1954
5	1	January, 1955
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6	2	April, 1956
7	2	April, 1957
	3	July, 1957
	4	October, 1957
8	2	April, 1958
	3	July, 1958
	4	October, 1958
9	2	April, 1959
	3	July, 1959
	4	October, 1959
10	1	January, 1960
	2	April, 1960
11	2	April, 1961
	3	July, 1961
	4	October, 1961
12	3-4	July-October, 1962
13	2	April, 1963
14	2	April, 1964
	3	July, 1964
15	2	April, 1965
	3	July, 1965
	4	October, 1965
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	3	July, 1966
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	2	April, 1967
	4	October, 1967
18	1	January, 1968
	2	April, 1968
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19	1	January, 1969
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The Archaeological Society of Ohio is organized to discover and conserve archaeological sites and material within the State of Ohio; to seek and promote a better understanding among students and collectors of archaeological material, professional and non-professional, including individuals, museums, and institutions of learning; and to disseminate knowledge on the subject of archaeology. Membership in this society shall be open to any person of good character interested in archaeology or the collecting of American Indian artifacts, upon acceptance of written application and payment of dues.

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